

Amendments to the Specification

Please amend the above-identified application, as follows:

[0002] “MANAGING PROCESSING WITHIN COMPUTING ENVIRONMENTS INCLUDING INITIATION OF VIRTUAL MACHINES,” Bulson et al., (IBM Docket No. POU920030140US1), Serial No. 10/667,163, filed September 17, 2003, ABANDONED.

[0021] One example of a heterogeneous computing environment is depicted in FIG. 1. In this example, the heterogeneous environment is a grid computing environment 100 including, for instance, a plurality of user workstations 102 (e.g., laptops, notebooks, such as ThinkPads, personal computers, RS/6000's, etc.) coupled to a job management service 104 via, for instance, the internet, extranet, or intranet. Job management service 104 includes, for instance, a web application to be executed on a web application server, such as Websphere offered by IBM®, or distributed across a plurality of servers. It has the responsibility for accepting user requests and passing the requests to the appropriate nodes of the environment. As one example, a user interacts with the job management service via a client application, such as a web browser or a standalone application. There are various products that include a job management service, including, for instance, LSF offered by Platform (www.platform.com), and Maui, an open source scheduler available at <http://www.supercluster.org>. (IBM® is a registered trademark of International Business Machines Corporation, Armonk, New York, U.S.A. Other names used herein may be registered trademarks, trademarks or product names of International Business Machines Corporation or other companies.)

[0029] One technique, referred to as ABI or Application Binary Interface, provides a more straightforward technique for running a program in a different environment. ABI provides a technique of taking an executable from one environment and running it in another environment without recompilation through the use of an emulation software layer or through direct hardware support on a target machine. One architecture that uses ABI is the AMD64 architecture, offered by AMD, Sunnyvale, California. An example of ABI is described in

“Binary Compatibility,” ~~http://gcc.gnu.org/onlinedocs/gcc/Compatibility.html~~, the content of which is hereby incorporated herein by reference in its entirety.

[0032] When a node, such as a workstation, comes online, STEP 500, it provides a set of attributes to its resource manager, such as the cluster resource manager, STEP 502. These attributes include, as examples, the platform (architecture) of the node; the operating system and operating system level of the node; as well as a set of compatibility attributes, including, for instance, any additional operating systems and/or any additional platforms (architectures) supported by the node through, for instance, ABI. This information is provided to the cluster resource manager via, for instance, Web Services Calls or Web Services Notifications. For instance, an XML document specifying these attributes is transferred to the cluster resource manager using Web Services Calls or Notifications, such as a SOAP call. One example of SOAP is described in “SOAP Version 1.2 Part 0: Primer,” Nilo Mitra, ~~http://www.w3.org/TR/2003/REC-soap12-part0-20030624/~~, the content of which is hereby incorporated herein by reference in its entirety.